

Appl. No. 09/914,725
Amdt. dated Sept. 9, 2003
Reply to Office Action of June 12, 2003

REMARKS/ARGUMENTS

The Examiner is correct that there had been a misunderstanding in filing this U.S. national phase of the International application PCT/CA00/00250. The misunderstanding resided in the belief that it is the claims amended during the Chapter II examination that would be examined by the U.S. Examiner, rather than the original claims.

However, since the Examiner has, in fact, examined original claims 1 and 2, it is believed best to continue the examination on the basis of the original claims which have now been essentially restored in the listing of the claims provided with this amendment, with appropriate modifications to remove multiple dependencies and to effect some other minor amendments. Thus, in claim 2, the objected wording "such as" has been replaced by "adapted". Claim 1, however, retains its original wording. The total number of claims presently under examination is 10. Claims 1 to 5 inclusive are product claims and 6 to 10 are method claims defining the method for the manufacture of the product.

Claim Rejections - 35 USC § 103

The Examiner has rejected claim 1 under 35 U.S.C. 103(a) as being unpatentable over Lacroix et al. Canadian Patent No. 1,284,282 in view of Kohnke et al. U.S. Patent No. 6,445,493.

The Examiner is correct in her statement that the distinction between Lacroix et al. and the present invention as claimed in claim 1, is the fact that Lacroix et al. does not disclose a decomposition by means of a computer program or algorithm of a desired spectral response into individual specific simulated responses, whereby the in-line concatenation of said tapered fiber filters with responses of various specific designs produces the desired specific response of the filter. However, the Examiner has combined Lacroix et al. with Kohnke et al., particularly referring to column 1, lines 55-64 of Kohnke et al and alleges that such combination makes claim 1 obvious. This is respectfully traversed for the following reasons:

Column 1, lines 55 to 64 of Kohnke et al. read as follows:

"Our new compound gain flattening filters can be manufactured using certain conventional steps including determining a filter desired loss spectrum and using a conventional algorithm to fit the desired loss spectrum with a series of filter components having individual spectral responses with peak losses specified at different wavelengths. However, instead of manufacturing a single set of filter components matching these specifications, at least a first of the filter components is fashioned from a pair of filter sub-components with similar spectral responses."

Thus, Kohnke et al. deals with balanced gain flattening filters such as those with long period gratings with Gaussian response profiles (column 1, lines 33-35). It is further stated in Kohnke et al. that manufacturing even simple such filter components can be difficult to achieve the desired accuracy (column 1, lines 25-27). Therefore, to achieve better accuracy Kohnke et al. propose instead of manufacturing a single set of filter components matching the desired specifications, that at least a first of the filter components is fashioned from a pair of sub-components with similar spectral responses (column 1, lines 61-64).

It is, therefore, submitted that it is improper to combine Kohnke et al which relates to special balanced gain flattening filters with Lacroix et al. which deals with a wavelength filter comprising a plurality of successive concatenated biconical tapered portions to arrive at the optical clean-up filter with a desired complex spectral response as defined in claim 1 herein.

According to MPEP 2143, the basic requirement of a *prima facie* case of obviousness is that "...the prior art reference (or references when combined) must teach or suggest all the claim limitations". Furthermore, according to MPEP 2143.01, the prior art must suggest the desirability of the claimed invention.

It is respectfully submitted that by combining Lacroix et al. and Kohnke et al neither of the above conditions has been met. Neither Lacroix et al. nor Kohnke et al. suggest that tapered fiber filters can be concatenated in-line on a single mode optical fiber to produce tapered fiber filters with specific wavelength response designs which closely match corresponding specific simulated responses resulting from a decomposition by means of a computer program or algorithm of the desired spectral response into individual specific simulated responses.

With hindsight of applicant's disclosure, the Examiner has combined and modified Kohnke et al so that it would somehow fit Lacroix et al and claim 1 of the present application. It is not believed that such combination is proper for reasons mentioned above, however, even if it were, the Examiner should have taken into account the explanatory notes of MPEP 2143.01, where it is stated that "the fact that references can be combined or modified is not sufficient to establish *prima facie* obviousness, unless the prior art also suggests the desirability of the combination (In re Mills, 916 F. 2d 680, 16 USPQ 2d 1432, Fed. circ. 1990)."

In the present combination made by the Examiner, rather than suggesting the desirability of the combination to achieve the invention of claim 1, Kohnke et al actually teach away from it by stating that "it can be difficult to achieve desired accuracy" and propose that "a pair of filter sub-components be used". There is nothing in claim 1 of the present application that requires such arrangement of sub-components. In fact, Kohnke et al. uses "conventional algorithm to fit the desired loss spectrum with a series of filter components having individual spectral responses with peak losses specified at different wavelengths (column 1, lines 58-60).

In contrast to this, the present applicant uses a computer program or algorithm to produce an optical clean-up filter with a desired complex spectral response. Kohnke's results, as illustrated in Fig. 5, have nothing in common with present applicant's results as illustrated in Fig. 6 of this application.

Based on the above, the applicant submits that the rejection of claim 1 is improper and that this claim is patentable over the combination of Lacroix et al. and Kohnke et al., since there is no suggestion in Kohnke et al. of a desirability of such combination to achieve the invention claimed in claim 1 herein.

Claims 2 to 5 are dependent on claim 1 and possess its patentable characteristics. Again, all these claims refer to tapered fiber filters which are not covered or suggested by Kohnke et al.

Claim 6 defines the method of producing an optical clean-up filter such as claimed in claim 1. It is believed to be novel and patentable over the combination of Lacroix et al. and Kohnke et al. for the same reasons as set out above with reference to claim 1.

Claim 7 specifies the equation on which the computer program is based and neither Lacroix et al nor Kohnke et al. disclose anything even remotely similar.

Finally, claims 8 to 10 are dependent on claim 6 and define various features of the novel method as set out in claim 6.

In addition to the above cogent argument, the applicant wishes to point out that the earliest date indicated in the Kohnke et al. patent is the filing date of the Provisional Application, namely Jan. 29, 1999. The applicant is enclosing herewith as an Appendix, a declaration under 37 CFR § 1.131 showing that this invention was completed and a patent draft thereof was made in December 1998, i.e. prior to the above earliest date shown in Kohnke et al. Consequently, Kohnke et al is also not applicable for this reason.

In view of the above, reconsideration and allowance of this application are solicited.

The Examiner is invited to call Applicant's agent if any questions remain following review of this response.

Respectfully submitted,



George J. Primak
Agent for the Applicant
Registration No. 24,991
Client No. 026031

GJP/pp
September 9, 2003
Tel: (514) 620-3936
Fax: (514) 620-7925

13480 Huntington
Montreal, QC H8Z 1G2
Canada

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APPENDIX**DECLARATION UNDER 37 CFR § 1.131**

I, the undersigned, François Gonthier, declare that I am the inventor of the invention disclosed and claimed in U.S. Patent Application No. 09/914,725 which corresponds to the International Application PCT/CA00/00250.

I also declare that I have completed this invention by December 1998 and prepared a patent draft which was then transmitted to the patent agent for drafting and filing of a patent application on this invention. A copy of my patent draft is attached hereto.

I, further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing therefrom.

Sept. 4, 2003
Date

François Gonthier
François Gonthier